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InteriorAX	INFORMATION	REPORT	CD NO.	25X1A
DUMPRY	#SSR (koscew Oblast)		DATE DISTR	14 March 195
UBJECT	Aircraft Plant No. 45 in Moscom		NO. OF PAGES	l <sub>k</sub>
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NFO	January 1946 to December 1949	25X1X	SUPPLEMENT TO REPORT NO	
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OURCE				· .
1.	Aircraft Flant No 15 in Loscow was Soviet air force general. (1) Af	filiated plants	were the Tsiam	ircraft

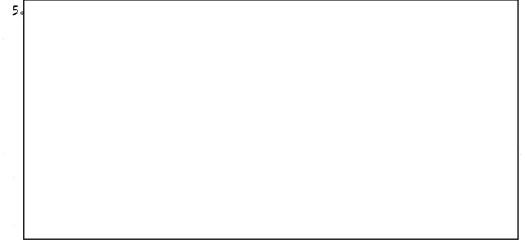
- 1. Aircraft Flant No 15 in Loscow was called Zavod 15 and was managed by a Soviet air force general. (1) Affiliated plants were the Tsiam /ircraft Plant, also located in the eastern part of Moscow, and Lavod 156 in Moscow. According to source, who spent several days at the Tsiam Aircraft Plant, this plant produced jet fighters equipped with Th I type turbines. Lavod 156 was a technical institute of the air force. Soviets and FWs who worked in or near this plant said that the two Giganto models, displayed at a 1948 sir parade in Moscow, were constructed in Eavoc 156. (2)
- 2. In 1947 aircraft plant No 45 started producing TR I type turbines. (3) Posters recruiting Soviets to work on the construction of these turbines were displayed in the plant in mid-1947 and were still seen in late 1948. The plant also produced parts for Tences and tractor and engine parts, The foundry was equipped with one coel-fired blast furnace for big iron and an electric furnace for chromo nickel steel. The pig iron and coal were simultaneously charged into the blast furnace. The liquid pig was poured into containers which were transported to the molds. The electric furnace had three electrodes and had a capacity of 200 to 300 liters, According to the name plate, this furnace was of American make. The furnace was charged with chrome, nickel, steel and a flux material which the plant engineer personelly added from a two-pound paper bag. Source also observed a casting process which he called centrifugal cast (Kokillen-Schleuder uss), but he was not able to describe this process. Machines installed in the main production shop during late 19h8 and early 19h9 included two or three annealing furnaces; presses from the Esslingen Fueller Firm, which arrived in Jamusry 19h9; and electric hardening furnaces which, according to inscriptions on the name plates, came from the Swedish "Asa" Firm. (h) This workshop produced various items including single parts for starter engines and tu bine blades and casings.

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- The test stand had been in operation since mid-1947, working day and right. This building and the surrounding area was off limits to P's, in at over a significal factions building housed two or three test stands. The testing period was not definitely determined but as the noise charged every eight to ten hours, it was assumed that this was the period during which one turbine was bested. In 1947 and 1943 explosions were occasionally heard and the sound of the engines would then be discontinued for some time.
- 4. Chipments of pig iron ingots, steel ingots, sheet metal, rods, coal, coke, and timber arrived by rail. During the summer of 1943, two boxes, 2 x 2 x 3 meters, arrived at the plant and were carefully unloaded and transported in an upright position. The boxes carried the English inscription "Rolls Royce" and other words which were not remembered. It was assumed that these boxes contained two turbines from England. (5)



- There was a wide road with street car tracks on the east ide of the plant. Power was supplied by the runicipal power plant in three phases of 120 volts each. The plant was surrounded by a board fence with barbed wire and guard towers. At night, plant police patrolled with dogs.
- 7. Reconstruction of the war demaged plant began in 1745 and the plant was enlarged by new construction. Hackinery and equipmen, from the Junkers Plant had been installed since 1946. Before 1945 the plant produced internal combustion aircraft on; ines and, until 1946, operated as an experimental plant as well as repairing and overhading aircraft engines. From January 1945 to December 1919, workshop No 13 was assigned to the experimental production of turbines for the JUNG 00 type engines. (3) .ach worker was required to namufacture a turbine part from a sketch. The part had to be completed within a certain length of time and was then checked and sent to the relain; shop where the tarlines were assembled. Source could draw no conclusions as to the success and status of these

experiments, because of this production process. Lowever, according to this source, mass production of turbines for the Garman type JUTO 004 engine was scheduled to start in early 1950. From an advertisement displayed in Korpus T, calling Laborers to work in the construction of tiese turbines, it was determined that the turbines were given the designor on TR I (Turbina reactivnaya).

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forkshop No 13 housed the sheet metal shop, he drop drawing shop (Titlezieherei) and the welding shop. The buildin was being equipped with conveyor belts through all sections. The shiet metal shop was equipped

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with various drop shears, cutilat rachines, direct cutting machines, and the press-cutting machines and 15 presses, among them, fixed presses, eccentric presses and hydraulic deep drawing presses. Host of the machinery came from Junkers and 'rado. In the welding shop there were modern welding machines, most of them of American and Swedish make, according to the name plates. Four small special electric welding machines, one large Swedish special electric welding machine, which was 2 meters long, and various aluminum welding machines and spot welding machines were observed. (9)

- 9. Torkshop No 13 had 690 employees, working in three eight-hour shifts. There were 200 Soviets, including women, per shift and 30 PTs, most of whom came from the Junkers and Arado Plants.
- 10. Aircraft plant No h5 was mainly concerned with experimental work. Hany draftsmen worked in a building which was partially screened by canvas and curtains. The building also had drafting rooms on the second floor.
- 11. About 300 to 400 engines were stored near the scrap dumps. Among these, the following types were recognized: BLW single and double-row radial engines and old Soviet in-line engines. Another type of engine, which was assured to be the Soviet version of an American model was stored in open boxes. This type of engine was equipped with an exhaust turbine with supercharger for the compressor. Engines of a similar type were also stored at the Tsiam Plant. It was assumed that such engines were produced at both the Tsiam Plant and Flant No 15. (10).
- 12. The plant produced V-shaped in-line engines until June 1948. These engines were repeatedly observed at the test stands. The engines were liquid-cooled and had 12 cylinders, six in each line. It was assumed that they were Soviet copies of a German engine. The Soviet engine had the same power as the German engine but was not as smoothly shaped. (11) Starting in June 1948, the plant increased the production of turbines, the testing of which was heard day are night. These turbines were 1.5 to 2 meters long, 50 cm in diameter andhad an exhaust, which was 30 to 35 cm in diameter. The eight-stage compressor was fitted with upright guide blades and an exhaust with a controllable cone (Verstellbarem Kegel). Eight light-metal, rotating wheels were fitted to the shaft and eight other wheels were fastened into slots of the compressor casing. The number and shape of turbine impellers was not known, as this part of the turbine was enclosed. The compressor casing was marked with three letters, one of which was the letter "i". (12)

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25X1 Corments, (1) For plant layout sketch see Annex l. sketch essentially agrees with, and supplements, previous reports. For plant location sec references. (2) The type designation TR I is reported for the first time. The relation-ship between Plant No L5 and the Tsiam Plant, as well as Zaveds 156 and 165, was previously reported. (3) This statement agrees with a previous report which stated that the production of turbines was begun during the fall of 1946 and mass production of these turbines was started in early 1947. 25X1A (4) German and other foreign make machine tools have been previously reported. However, this is the first time detailed information on this machinery has been reported. (5) NETE power plants were observed in Plant No 115 during approximately the same poriod. (6) For sketch of this ring, see Annex 2, sketch A. This ring may be a casing for the fuse connection or, if the reproduction is not quite correct, some kind of distributor ring for compressed air. (7) The cimensions of the starter, which are reported for the first time,

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indicate an engine of about 2,000 rpm and about 12 to 15 Tr.

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	1.27	This does not agree with the statement by the first source, and with	
05)//		was started in 1947.	
25X1	(9)	For plant layout see Annex 2, Sketch B. This sketch differs considerably from that provided	25X1
		However, the two sketches agree on the location of some of the plant buildings.	25/(1
	(10)	Since it is not known whether source identified the engines by their name plates, his descriptions, especially of the German engines, should	
		be received with reserve. Some German engine types such as the JULO 213 and EMW were also fitted with turbo superchargers.	
	(11)	The engines are believed to be of the type AN-38 which were reportedly produced until mid- 1947	
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2 Annexes: Sketches.

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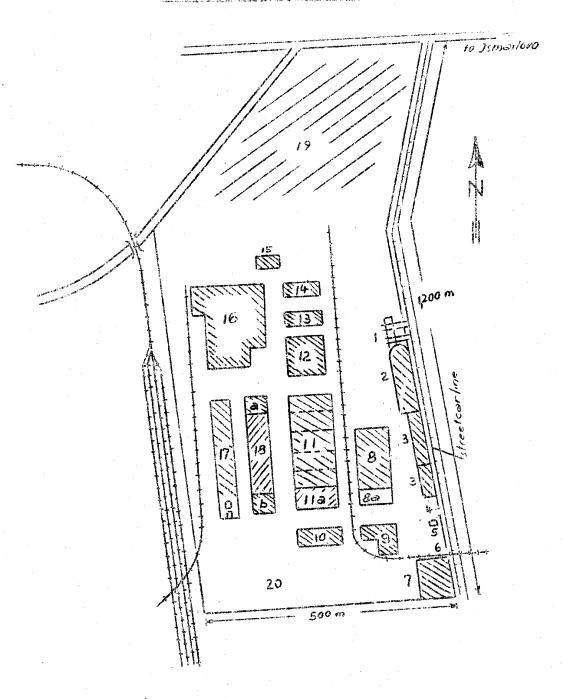
- i. Lain gate.
- 2. Administration,
- 3. Apartments.
- 4. South gate.
- 5 Guard house.
- 6. Railroad connection.
- 7. Apartments.
- 3. Instrumentsworkshop and precision machine shop. Gauges were also constructed in this shop.
- 9. Laboratory.
- 10. PV camp.
- 11. Korpus II. Part of this building was used for production and the rest was used for storage.
- lla. Four-story administration building.
- 12. Machine shop equipped with lathes, milling machines and grinding machines.
- 13. Aliminum foundry equipped with several small blast smelting furnaces.
- 14. Chemical laboratory.
- 15. Test stand for turbojet engines.
- 16. Morpus VIII. This building allegedly housed test stands for cylinder in-line engines until mid-1947. After that time the building was vacant.
- 17. Auxiliary power plant equipped with turbines and two coal-fixed boilers. This plant was in operation only part of the time.
- 13. Turbine assembly shop.

  13a. Forge equippedwith several forging hammers. Source observed the production of turbine parts, especially casings in this forge.

  18b. Iron and chrome nickel steel foundry.
- 19. Now buildings in a former cemetery.
- 20. Several small buildings.

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Aircraft Plant to 15 in Poscon



to scale

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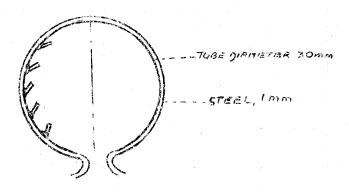
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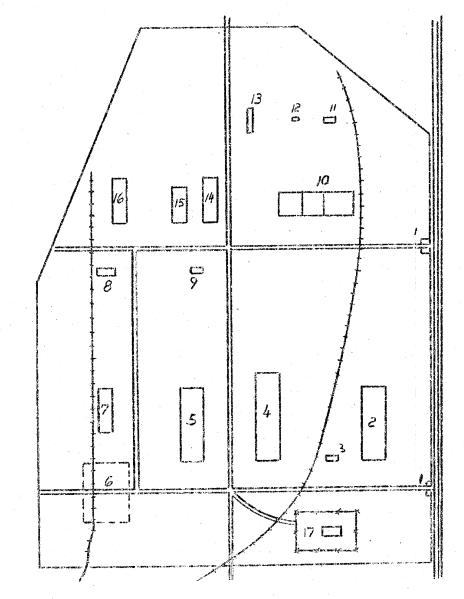
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cork bioce observed at aircraft Flant No. 45

Barrier A



Sketch 8 Sircraft Hant No. 45 in Loscow, Layout



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Legend: See next page

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### Legend:

1. Cuard houses.

(spanathebendo) and the his big wormship. In 1946 he downed from Soviets that a production line was being constructed here.

- 3. Plant management and drafting offices.
- 4. Korpus II, 300 x 80 meters, reconstructed from war damage by FEs. As the roof collapsed twice because of faulty construction, the completion of the building was delayed until late 1948. The building was still vacant as of Lecember 1949.
- 5. Force, 250 x 80 meters, equipped with a drop force and eight to ten hammers, the largest of which weighed five tons. The force fires were oil burning. The building also housed a lathe shop and a hardening shop used for plant requirements.
- 6. Savmill.
- 7. Steel warehouse.
- 8. Oxygen warehouse.
- 9. Foundry, equipped with one stationary open-hearth furnace with a capacity of 2 tons per tapping, one American electric steel furnace of unknown capacity, and several cohe-fired cupola furnaces. The foundry also had two hand molding shops and produced slugs for jigs and fixtures. The workshop employed 20 Soviets and 20 PWs per shift.
- 10, Workshop Wo 13, 250 x 80 meters.
- 11. Boiler house.
- 12. Dispensery.
- 13. New building, CO x 20 meters, without equipment. It was learned from Soviet laborers that this building was to house the bronze foundry.
- 14. New building, 150 x 80 moters.
- 15. Lathe shop, off limits to FWs. Source observed the following equipment: American automatic lathes, Swedish and German lathes, and a large vertical boring and turning mill for turbine parts.
- 16. Ten to fifteen roofed test stands covering an area of about 150 x 50 meters, used to test engines which were overhauled at the plent.
- 17. PU camp.

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